

Chapman University

University Honors Program Course

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University Honors Program: HON 286-01

Origins

Syllabus - Spring 2024

When & Where : Mo & We 1:00 - 2:15 Doti Hall 105

Course Description: *Prerequisite: acceptance to the University Honors Program, or consent of instructor. This course concerns the origin of nature from the Big Bang to Humanness as revealed by scientific inquiry. Attendance and class participation is essential. 3 credits.*

Instructor: Jack Horner, Professor, Presidential Fellow, Honors Program

jhorner@chapman.edu

Office Hours: By appointment.

Honors Program Coordinator, Ashley Cosgrove (714) 744-7646 cosgrove@chapman.edu

GE Natural Science Inquiry Learning Outcome:

Students engage in scientific investigation to explore the knowledge produced by scientific processes.

Course Learning Objectives:

- * Apply the scientific method to evaluate the observations, measurements, and predictions used to determine origins.
- * Learn the difference between scientific theory and popular opinion.
- * Understand reductionism and outside the box thinking.
- * Evaluate the science interpreted by various scientific arguments based on physical evidence.
- * Learn how to make a scientific argument.

Honors Program Learning Outcomes:

Upon completing a course in the University Honors Program students will have:

1. Obtained a starting point for integrative exploration of the development of cultures and intellectual achievements through a variety of disciplinary and interdisciplinary perspectives;
2. Sharpened their ability to critically analyze and synthesize a broad range of knowledge through the study of primary texts and through engagement in active learning with fellow students, faculty, and texts (broadly understood);
3. Understood how to apply more integrative and interdisciplinary forms of understanding in the advancement of knowledge and in addressing complex challenges shaping the world; Developed effective communication skills, specifically in the areas of written and oral exposition and analysis.

Textbooks:

No textbooks required

Grading:

Points:

Mid-Term	100
Active and appropriate participation (class attendance; focused and meaningful involvement in class activities)	200
Final	<u>200</u>
TOTAL POINTS	500

400 points are required for a pass

• All students are encouraged to attend every class meeting. Poor attendance will affect your grade. Absences exceeding 20% normally result in the student receiving a grade of “NP” unless he/she withdraws officially (2 “tardies” constitute an absence). Active and appropriate participation (class attendance; focused and meaningful involvement in class activities). Each student is required to take an active part in class discussions.

• All cell phones must be off and put out of reach during class time. Side chatting or cell phone use in class is unacceptable, and offenders will be asked to leave and marked absent.

Chapman University’s Academic Integrity Policy:

Chapman University is a community of scholars that emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work and academic dishonesty of any kind will be subject to sanction by the instructor/administrator and referral to the university Academic Integrity Committee, which may impose additional sanctions including expulsion. Please see the full description of Chapman University's policy on Academic Integrity at https://www.chapman.edu/academics/academic-integrity/_files/academic-integrity-policy.pdf

Chapman University’s Students with Disabilities Policy

“In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Disability Services Office. If you will need to utilize your approved accommodations in this class, please follow the proper notification procedure for informing your professor(s). This notification process must occur more than a week before any accommodation can be utilized. Please contact Disability Services at (714) 516–4520 or visit www.chapman.edu/students/student-health-services/disability-services if you have questions regarding this procedure or for information or to make an appointment to discuss and/or request potential accommodations based on documentation of your disability. Once formal approval of your need for an accommodation has been granted, you are encouraged to talk with your professor(s) about your

accommodation options. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.”

Chapman University’s Equity and Diversity Policy

Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in [Chapman’s Harassment and Discrimination Policy](#). Any violations of this policy should be discussed with the professor, the [Dean of Students](#) and/or otherwise reported in accordance with this policy.

Student Support at Chapman University. Over the course of the semester, you may experience a range of challenges that interfere with your learning, such as problems with friend, family, and or significant other relationships; substance use; concerns about personal adequacy; feeling overwhelmed; or feeling sad or anxious without knowing why. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. You can learn more about the resources available through Chapman University’s Student Psychological Counseling Services here:

<https://www.chapman.edu/students/health-and-safety/psychological-counseling/>

Fostering a community of care that supports the success of students is essential to the values of Chapman University. Occasionally, you may come across a student whose personal behavior concerns or worries you, either for the student’s well-being or yours. In these instances, you are encouraged to contact the Chapman University Student Concern Intervention Team who can respond to these concerns and offer assistance:

<https://www.chapman.edu/students/health-and-safety/student-concern/index.aspx>. While it is preferred that you include your contact information so this team can follow up with you, you can submit a report anonymously. 24-hour emergency help is also available through Public Safety at 714-997-6763.

Topics to be covered with proposed visuals (Syllabus) based on a two 75 minute class per week schedule.

Jan. 29 US Who are we - why are we here - what are our expectations // Tools and Terms. What is this class about?

Jan. 31 The Nature of Nature Project - The Gathering

Feb. 5 Naught to Cipher, Apothegm to Axiom:

Feb. 7 Origin of Forces, Rules and Stuff (atoms)

Feb. 12 Origin of Stars & Galaxies (Charles Darwin’s 215th Birthday)

Feb. 14 Origin of Complexity

Feb. 19 Origin of Molecules

Feb. 21 Origin of Patterns

Feb. 26 DISCUSSION: Self assembly, replication, promiscuous chemistry & SELECTION

Feb. 28 Origin of Life

Mar. 4 Origin of Procaryotes & Procaryote complexes

Mar. 6 Origin of the Eukaryote Cell

Mar. 11 Origin of Sexual Reproduction

MAR 12 (MIDNIGHT) MID-TERM PROJECT DUE

Mar. 13 + MID-TERM DISCUSSION

Mar. 18 - 22 SPRING BREAK

Mar. 25 The Origin of Eukaryote Complexes

Mar. 27 Origin of Multicellular Organisms

Apr. 1 Origin of Plants

Apr. 3 Origin of Animals

Apr. 8 Origin of Invertebrate Animals (LAB)

Apr. 10 Origin of Vertebrate Animals

Apr. 15 Origin of Sauropsids & Mammals

Apr. 17 SKELETONS LAB

Apr. 22 SKULLS LAB

Apr. 24 Origin of Homo sapiens

Apr. 29 Origin of Humanness

May 1 Origin of Death

May 6 Creating new life-forms (Genetic engineering life) // DISCUSSION

May 8 Synthesis // DISCUSSION